

## EXHIBIT C

Kopald Aggrieved Neighbor claim-Electromagnetic Radiation. Analysis, Jack Jannarone, ZBA Chair.

In paragraph 7 of her affidavit, Ms. Kopald writes:

“I also have a demonstrated and recognized sensitivity to electromagnetic radiation, levels of which drop with the square of distance. Any transmitters, such as wireless technology (WiFi) and utility smart metering, placed on the Tonneson property closer than would have otherwise occurred had they been required to proceed through a public and probing Planning Board process to better site the home with adequate buffers, will create a nuisance to me. If the Tonneson house was either required to be further (sic) away from my home, and/or there was more tree coverage dissipating the signal, the impact would have been greatly diminished, if not eliminated. After the trees were cut, wireless transmission signal that did not exist in my home previously now literally and negatively affects me in my home. This was confirmed independently with an Acoustimeter radiation measurement device. I have been forced to install expensive radiation blocking shielding on my windows that, although reducing electromagnet radiation in some of my rooms, has not eliminated the problem. More expensive remediation is necessary to fix some of the rooms, including stapling materials to the exterior of my house. In any case, the remediation is not a perfect fix, and the environment has been degraded by the unnecessary cutting of the trees, to say nothing of any transmitters that exist or could go on the Tonneson property.”

Ms. Kopald asserts that sensitivity to electromagnetic radiation is “demonstrated and recognized,” but offered no proof for the Record. She asserts, also without proof, that the Planning Board could dictate where a house could be sited on a 13.9 acre parcel to ensure buffers of her liking. She does provide what she considers to be proof of her allegations of an increase in wireless signals after the trees were cut in an affidavit by Matthew Waletzke. There was also testimony by Ms. Barras in support of Ms. Kopald. Mr. Waletzke states that he is a certified Building Biology Environmental Consultant certified by the International Institute for Building-Biology and Ecology. In his affidavit he makes no claim to be an expert witness as recognized in a court of law. Instead, he states:

“2. I have measured electromagnetic fields in Deborah Kopald's house on three separate occasions-Once in October 2014 and again in October 2019 after the trees were cut on the subject property (Sec/Blk/Lot 11-1-1.52) below Ms. Kopald's house (Sec/Blk/Lot 20-2-5) and again in April 2020.”

3. “There was an increase in electromagnetic fields in Ms Kopald's house between the times I took readings in 2014 and October 2019. While I did not take a reading directly before the subject construction began and many things could have accounted for some or all of the recent sudden increase that Ms. Kopald reported seeing on her Acoustimeter measuring device, I can specifically assert that trees attenuate, that is to

say abate radiation, such as pulse-modulated microwave radio frequency radiation (PM MW RFR) emitted by cell towers, Wi-Fi, smart meters and the like.”

Mr. Waletzke does not provide any numbers to document the magnitude of his readings in 2014 or October 2019. He does not cite the units of measurement of the electromagnetic field. He does not state what type of device that he used to measure the electromagnetic field. He does not mention calibration of the device. He does not provide certification that his device is recognized either in his alleged field of expertise or in a court of law. He does not provide any information to show that he knows what direction signals were coming from. In fact, it is possible to infer from his comments that he used Ms. Kopald's Acoustimeter or simply accepted her readings.

Also, Mr. Waletzke states that “many things could have accounted for some or all of the recent sudden increase that Ms. Kopald reported seeing on her Acoustimeter measuring device.” Here he admits that he doesn't know where the increase came from. Instead of proving Ms Kopald's assertion, he creates reasonable doubt. He assert trees attenuate radiation. That seems to be reasonable, but in paragraph 4 he states that “The major destruction of tree cover, such as occurred directly in front of Ms. Kopald's property involved a clear-cut that would give radiation a direct path, which did not previously exist, to her windows and house. In paragraph 5 he speaks of “ a significantly reduced forested area adjacent to a house”. In paragraph 9 he writes “To reiterate and in conclusion, destruction of a forest in front of a structure will increase PM MW RFR in front of the structure.

Mr. Waletzke used the words “major destruction,” “directly in front of,” clear cut,” “direct path,” “significantly reduced forest adjacent to a house,” and “destruction of a forest in front of a house,” all of which imply that there was a massive clearing right up to Ms. Kopald's house. This does not comport with reality.

The Tonnesons provided a photograph taken in April 2019 before construction began of the area where they intended to build the new home. This area was fairly level and, for the most part, devoid of living trees. This can be confirmed on a photograph taken from above in 2016 and provided by Mr. Finkbeiner, surveyor for Ms Kopald. This aerial photo shows bare spots in the area where the house was to be constructed confirming that, in fact, there were few living trees in the level area. The Tonneson photo does show a mature forest on the uphill slope toward Ms. Kopald's house. This forest is still intact for the most part. In testimony provided at the June 2020 Public Hearing for the Kopald appeal, it was established that there are about 180 feet of undisturbed forest between the cleared area for the new Tonneson house and Ms. Kopald's house. Mr Waletzke's insinuations of major destruction, clear cutting, etc., are not supported by the Record. In fact, the record shows that there was no Wi-Fi device in the Tonneson house in October 2019, and that there probably wasn't electricity available at that time. In addition, the Record shows that the Tonneson house is wrapped in foil covered insulation and has been fitted with special windows to minimize any electromagnetic energy that might impact Ms Kopald. These two precautions are surely more effective than trees at attenuating radiation. And it must be noted that the forest on the slope is still there.

The testimony by Ms. Barras can be summarized as leaves on trees attenuate electromagnet radiation, especially in the 5G frequency range. When she was advised that there is no 5G wireless service in Fort Montgomery, her reply was that “it was coming.” But is it? Our landline provider is Verizon. That company has a fiber service called FIOS. There is no FIOS in our community because we don't have the population density to justify the expense to install it. It is unlikely that we ever will. 5G operates at a very high frequency and has a very short range compared to conventional cell service.

Therefore, 5G requires a large number of cells to provide service to an area. Current proposals include placing cells in neighborhoods on street light poles or telephone poles. This would require a large expenditure of capital and again our community does not have the population density to justify the expense. In fact, if any corporation wished to install 5G in Fort Montgomery, it would find that it would be prohibited by our Zoning Code. Any application to The ZBA for a variance or to the Town Board for a change to the Zoning Code would very likely be opposed by Ms. Kopald.

As noted by Ms. Kopald, electromagnetic radiation levels drop with the square of distance. This is a restatement of the inverse square law in physics, i.e., multiply by  $1/r^2$  where  $r$  is the distance from the source. So, at a distance of 100 feet from a transmitter the signal would be 10,000 times weaker. This explains why weak signals such as Wi-Fi have such a short range. The new Tonneson house is situated due south of the Kopald house and is 60 feet lower. Could there be some signals that might pass through the area that was cleared and up to Ms. Kopald's house that might have been attenuated by the trees? The answer is that it is not likely. Most signals would not reach that far because of the inverse square law. In addition, the area to the south has low population density all the way to Bear Mountain. Adding to that, the terrain drops abruptly to the south and east causing terrain masking which would prevent signals from reaching the clearing. The only signals reaching Ms. Kopald from the south would have to have enough power to get that far as well as line-of-sight over the clearing – and not through it. This would rule out Wi-Fi and individual cell phones. Mr Waletzke also mentions cell towers which do emit more power than devices such as Wi-Fi or cell phones. The website [antennasearch.com](http://antennasearch.com) shows four towers in the area of Ms. Kopald's home. One is located on West Point property to the north. It is not designated as a cell tower, but it is not a factor because the cleared area lies south of Ms. Kopald's house. The second one appears to be located on the eastern tower of the Bear Mountain Bridge. It is registered to the New York State Bridge Authority so it probably does not provide cell service and its transmitted power is unknown. The Bridge can be seen from the Tonneson property so it must be in line- of sight of the Kopald house which is 60 feet higher. Therefore radiation from this tower would pass over the clearing and not through it. Even if one were to argue that the signal passed through the clearing, it would be attenuated by a foil lined house and at least 180 feet of undisturbed forest. The third and fourth towers are registered to cell phone companies, and they are located on the eastern side of the Hudson River. They appear to be the towers located on what is commonly called the Polhemus property. These two towers are located less than 20 degrees south of east of the Kopald house. Therefore emissions from these towers would pass through undisturbed forest to reach the Kopald house and not through the clearing which is 180 feet or more to the south and 60 feet lower.

For the reasons cited, Ms Kopald has not demonstrated that she is an aggrieved neighbor because of electromagnetic radiation.